

## The new Bio-QZ generation

Versatile, effective, and robust  
in substrate treatment



# New design and numerous improvements for efficient substrate treatment

The Bio-QZ cross-flow shredder has been impressing customers for over ten years, processing different materials, such as packaged food, organic waste, and energy crops, and preparing them ideally for the fermentation process in biogas plants.

## Highlights

- Large maintenance port
- Swivel-mounted discharge cover
- Compact design
- Easy wear plate change
- Optimized outlet and curved gate to prevent blockages
- New, improved seal
- Compact bearing unit
- Different accelerating and shredding tools for different materials
- Further upgrades possible for longer service life



▲ Compact design

▲ Different tools

▲ Bolted and clamped wear plates, improved seal

▲ Swivel-mounted discharge cover

## Improved ease of maintenance

The new Bio-QZ generation is now available in a modern, compact, and, at the same time, stable design in sizes 900 mm, 1200 mm, and 1600 mm. The main focus was to improve ease of maintenance. Besides a significant increase in the size of the maintenance port, it is also easier to access the discharge, belt, and belt pulleys. In addition, the wear plates inside the machine can be replaced more easily.

The further improved discharge geometry helps the material to pass through the machine smoothly without any blockages. At the same time, the sealing system was enhanced to give to the machine greater protection.

The secret of the Bio-QZ's success lies above all in its inner workings. In addition to the classic chains, ANDRITZ MeWa now

offers many additional accelerating and shredding elements for optimum substrate treatment. When combined, these elements form a unique overall system, according to the material and the desired effect, that can be further upgraded to provide substantially longer service life if needed. As a result, one Bio-QZ barely resembles another, and the customer receives the optimum solution tailored to his needs.

# A wide variety of applications for optimum results



▲ Organic waste



▲ Renewable resources



▲ Horse manure



▲ Packaged food



	<b>Corn silage</b>	<b>Sugar beets</b>	<b>Grass clippings</b>	<b>Cow and horse manure</b>	<b>Packaged food</b>	<b>Municipal organic waste</b>	<b>Slaughterhouse waste</b>
<b>Bio-QZ 900</b> 55/75 kW	up to 6 t/h	up to 6 t/h	up to 3 t/h	up to 2 t/h	up to 4 t/h	up to 5 t/h	up to 3 t/h
<b>Bio-QZ 1200</b> 75/90 kW	up to 10 t/h	up to 15 t/h	up to 5 t/h	up to 3 t/h	up to 6 t/h	up to 10 t/h	up to 5 t/h
<b>Bio-QZ 1600</b> 132/160 kW	up to 20 t/h	up to 30 t/h	up to 10 t/h	up to 8 t/h	up to 10 t/h	up to 20 t/h	up to 8 t/h

The throughputs stated depend on the type and composition of the input material, the drive power, and the operating mode.

## The diversity is what makes the difference

Whether it is processing packaged food, organic waste, slaughterhouse and catering waste, or energy crops like corn and grass silage, rye whole crop silage or corn-cob mix, the Bio-QZ's versatility is what makes it so valuable. The Bio-QZ treats grass clippings, which are otherwise difficult to handle, as well as cow, horse, and poultry manure quickly and effectively. Flexible tools inside the machine produce

a homogeneous substrate that has a positive effect on many important factors in a biogas facility. If the Bio-QZ is used, the gas formation and fermentation times are shorter, the overall gas yield in the fermenter is higher, and the economic efficiency of the entire plant is enhanced. Any foreign objects present, such as packaging, are detached from the organic material and removed easily in the next stage.

### Materials

- Organic waste
- Corn/grass silage, grass clippings
- Horse, cow, and poultry manure
- Slaughterhouse waste
- Packaged food
- Sugar beets

# The Bio-QZ in the biogas plant

## More stable processes & faster gas formation



### Process advantages

- High throughputs
- Wide range of different materials
- Much shorter dwell time in the fermenter
- Higher gas yield due to faster gas formation
- Packaging removed from organic material, making subsequent separation easier
- More stable processes, stirring times halved
- Homogeneous substrate suitable for pumping
- Scum layers dissolve more quickly
- Insensitive to metal parts and stones
- Low wear due to operating principle without knives
- Benefits for co-fermenters and renewable energy plants
- Use of all proven dry and liquid feed systems
- Easy to install in existing plants

### Complete Bio-QZ systems

ANDRITZ MeWa offers the complete process chain, from supply of the input material, to its disintegration, to feeding it to the fermenter. The individual process stages can be controlled through a common interface or included in the plant's overall electronic control system. In this case, the system is adapted to the individual circumstances for each plant. Existing biogas plants can also be



upgraded easily with a Bio-QZ for more efficient use of gas potential.

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